VOLUME 34 NUMBER 1
ISSN 1071-2690
JANUARY 1998

CONTENTS

INVITED REVIEW

Cell Cross-Contamination in Cell Cultures: The Silent and Neglected Danger
Olivera Markovic and Nenad Markovic 1

LETTERS TO THE EDITOR

Scientific Reports

Preparation of a Pressurization System to Study the Effect of Hydrostatic Pressure on Chondrocyte Cultures
Fabiola Nerucci, Antonella Fioravanti, Maria Rosaria Cicero, Roberto Marcolongo, and Giuseppe Spinelli 9
Aneuploidy Induced by Cyclophosphamide in Developing Rat Testes
Ajit Kumar Saxena and Gajendra Singh 11
Construction of *Xenopus* (B3.2) and Human (HeLa) Cell Lines Expressing the Tetracycline-Controlled Transactivator (tTA)
Olga Camacho-Vanegas, Liliana Mannucci, and Francesco Amaldi 14
Cultured Human Nasal Gland Cells in a Three-Dimensional Collagen Gel
Yongqing Guo, Yuichi Majima, Yuichi Fujita, Takeshi Shimizu, Toshimichi Yoshida, Teruyo Sakakura, and Yasuo Sakakura 16
Ca^{2+} Mobilization in Fetal-Human Cardiac Myocytes is Stimulated by Isoproterenol and Inhibited by Ryanodine
Mark Tornason, Donald E. Richards, and Patty I. Mathias 19
Promoting Matrix Invasion by Human Lung Epithelial Cells
Ronald P. Burwinkel, Dieter C. Gruenert, Ramanda T. Upshaw, and Michael D. Infeld 22
Integrins: Utility as Cell Type- and Stage-Specific Markers for Hepatocellular Carcinoma and Cholangiocarcinoma
Munechika Enjoji, Hironori Sakai, Manabu Nakashima, and Hajime Nawata 25
A Simple Method for Freezing and Storing Viable Tissue Fragments
Simon W. Hayward 28
The Effect of Impermeable Oxidants on the Growth of Neoplastic Cells
D. R. Richardson and V. Richardson 30

BIOTECHNOLOGY

Sensitivity of Isoenzyme Analysis for the Detection of Interspecies Cell Line Cross-Contamination
Raymond W. Nims, Adam P. Shoemaker, Marcie A. Bauernschub, Laura J. Rec, and John W. Harbell 35

CELLULAR AND MOLECULAR TOXICOLOGY

Primary Culture of Choroidal Epithelial Cells: Characterization of an *In Vitro* Model of Blood-CSF Barrier
Wei Zheng, Qiuqu Zhao, and Joseph H. Graziano 40

CELLULAR MODELS

Reconstituted Human Oral and Esophageal Mucosa in Culture
Dalphine Oda, Christopher E. Savard, Lydia Eng, John Sekijima, Geoffrey Haigh, and Sum P. Lee 46
Establishment and Characterization of a Porcine Kidney Cell Line, FS-L3, Which Forms Unique Multicellular Domes in Serum-Free Culture
Yoshihiro Sakoda and Akio Fukusho 53
Development and Characterization of SV40 Immortalized Rat Parotid Acinar Cell Lines
D. O. Quissell, K. A. Barzen, R. S. Redman, J. M. Camden, and J. T. Turner 58

GROWTH, DIFFERENTIATION AND SENESCENCE

Stimulation of Rat Hepatocyte Proliferation *In Vitro* and *In Vivo* by Factors Derived from the Bovine Small Intestinal Mucosa
Hajime Sasaki, Atushi Nemoto, Hisae Kume, Sonoko Narisawa, and Naommy Takahashi 68
Cross-Talk Between Signaling Pathways in Murine Embryonic Palate Cells: Effect of TGFβ and cAMP on EGF-Induced DNA Synthesis
Wayde M. Weston, Merle B. Potchinsky, Cynthia M. Lafferty, Linh Ma, and Robert M. Greene 74

INFECTIOUS DISEASE/CELLULAR PATHOLOGY

In Vitro and *In Vivo* Host Range of *Anticarsia gemmatalis* Multiple Nuclear Polyhedrosis Virus
James J. Grasela and Arthur H. McIntosh 79

VOLUME 34 NUMBER 2
ISSN 1071-2690
FEBRUARY 1998

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

A Novel Synoviocyte Line (RAMAK-1), Derived from a Patient with Rheumatoid Arthritis
M. Kawakami, S. Matsukuma, M. Hara, T. Hidaka, K. Suzuki, A. Kitani, S. Hiroi, T. Ishizuka, Y. Matsuki, H. Nakamura ... 85
M-CMRL, A New Axenic Medium to Replace Indicator Cell Cultures for the Isolation of All Strains of *Mycoplasma hyorhinis*
Richard A. Del Giudice 88
Cell-Material Systems for Anterior Cruciate Ligament Regeneration
C. Laurencin, M. Attawia, E. Botchwey, R. Warren, and E. Attia 90
Establishment of a Human Leukemia HL-60 Cell Line that Expresses High Levels of M-CSF Receptors
Isao Kasugai, Kazushige Morimoto, Toru Kawanishi, and Takao Hayakawa 93
B-Lymphoblastoid Cell Lines from Cancer Patients
Won Keun Lee, Seong Min Kim, Yong Shick Sim, Sung Gyu Cho, Sul Hee Park, Chul Woo Kim, and Jae-Gahb Park 97

BIOTECHNOLOGY

N-glycosylation of a Baculovirus-Expressed Recombinant Glycoprotein in Three Insect Cell Lines
P. C. Kulakosky, M. L. Shuler, and H. A. Wood 101
Massive Culture of Human Liver Cancer Cells in a Newly Developed Radial Flow Bioreactor System: Ultrafine Structure of Functionally Enhanced Hepatocarcinoma Cell Lines
Masaaki Kawada, Seishi Nagamori, Hideki Aizaki, Kenichi Fukaya, Minoru Niiya, Tomokazu Matsuura, Hajime Sujino, Satoshi Hasumura, Hitoshi Yashida, Satoru Mizutani, and Hirashi Ikenaga 109

CELLULAR AND MOLECULAR TOXICOLOGY

Ecdysteroid Resistant Subclones of the Epithelial Cell Line from *Chironomus tentans* (Insecta, Diptera). I. Selection and Characterization of Resistant Clones
Margarethe Spindler-Barth and Klaus-Dieter Spindler 116

CELLULAR MODELS

Culture of Chondrocytes in Alginate Gel: Variations in Conditions of Gelation Influence the Structure of the Alginate Gel, and the Arrangement and Morphology of Proliferating Chondrocytes
Margaret B. Aydelotte, Eugene J.-M. A. Thonar, Jürgen Molleenhauer, and Johannes Flechtenmacher 123
A Simplified Model of Hypoxic Injury in Primary Cultured Rat Hepatocytes
Tomoo Kamiya, A-Hon Kwon, Toshiki Kanemaki, Yoichi Matsui, Shouji Uetsuji, Tadayoshi Okumura, and Yasuo Kamiyama ... 131
Evaluation of Metanephric Maturation in a Human Fetal Kidney Explant Model
Douglas G. Matsell and Tracey Bennett 138
Different Characteristics of Endothelial Cells from Central and Peripheral Human Cornea in Primary Culture and After Subculture
Jürgen Bednarz, Anna Rodokanaki-von Schrenck, and Katrin Engelmann 149

GROWTH, DIFFERENTIATION AND SENESCENCE

Transient Inhibition of L929 Cell Mitosis and Locomotion by Argon Ion Laser Irradiation
Karl W. Lanks, Jian-Ping Gao, and Bai-Tang Lai 154
Rapid, Fluorometric DNA Determination for Chick Limb-Bud Mesenchymal-Cell Microcultures
Douglas F. Paulsen, Wei-Dang Chen, Tressa Scineaux, and Dominic Adams 158
The Time-Pattern of Rises and Falls in Proliferation Fades with Senescence of Mortal Lines and is Perpetuated in Immortal Rat Hepatoma Fao Cell Line
J. Maigné, J. Deschatrette, S. Sarrazin, B. Hecquet, S. Guerrout, and C. Wolfrom 163
The Presence of Transcription Factors in Fetal Bovine Sera
Paul A. Knepper, Chandra Shekhar Mayanil, William Goossens, David G. McLone and Erin Hayes 170
Apoptosis in the Chick Wing Bud and the Permanence of FGF-2 Rescue
Janice K. Noveroske and Jeffrey A. MacCabe 174
Topography of Amphiregulin Expression in Cultured Human Keratinocytes: Colocalization with the Epidermal Growth Factor Receptor and CD44
Nicola Nylander, Lynne T. Smith, Robert A. Underwood, and Michael Piepkorn 182
The Role of Hepatocyte Growth Factor (HGF) at Progressive Stages of Metanephric Development
William E. Sweeney, Jr. and Ellis D. Avner 189

VOLUME 34 NUMBER 3
ISSN 1071-2690
MARCH 1998

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

Stage-Related Chondrogenic Potential of Human Limb Bud Mesenchyme Cells, *In Vitro*: Role of Protein Kinase C
Yoon-Ah Kook, Chang-Duk Jun, Sung-Gak Hong, Joseph Zernik, Eun-Cheol Kim, Sang-Cheol Kim, Shin-Sung Kang, and Hun-Taeg Chung 197
Extracellular Matrix Interferes with Colorimetric Estimation of Cell Number
P. A. Underwood and P. A. Bean 200

CELLULAR MODELS

Fibronectin Production by Cultured Human Lung Fibroblasts in Three-Dimensional Collagen Gel Culture
Yuichi Adachi, Tadashi Mio, Keiichi Takigawa, Ilja Striz, Debra J. Romberger, John R. Spurzem, and Stephen I. Rennard 203
Culture of Human Main Pancreatic Duct Epithelial Cells
Dolphine Oda, Christopher E. Savard, Toan D. Nguyen, Eric R. Swenson, and Sum P. Lee 211
A Comparative Molecular Analysis of Four Rat Smooth Muscle Cell Lines
Anthony B. Firulli, David Han, Louise Kelly-Roloff, Victor E. Koteliansky, Stephen M. Schwartz, Eric N. Olson, and Joseph M. Miano 217
Properties of a Polarized Primary Culture from Rat Renal Inner Medullary Collecting Duct (IMCD) Cells
Birgit Ruhfus, H. Günther Bauernschmitt, and Rolf K. H. Kinne 227

GROWTH, DIFFERENTIATION AND SENESCENCE

Ligand-Dependent and -Independent Interactions with the Transforming Growth Factor Type II and I Receptor Subunits Reside in the Aminoterminal Portion of the Ectodomain of the Type III Subunit
Akiyoshi Taniguchi, Koichi Matsuzaki, Katsuya Nakano, Mikio Kan, and Wallace L. McKeehan 232
Application and Evaluation of the AlamarBlue Assay for Cell Growth and Survival of Fibroblasts
Sherry L. Voytik-Harbin, Andrew O. Brightman, Beverly Waisner, Carlton H. Lamar, and Stephen F. Badylak 239
Maturation-Dependent Gene Expression in a Conditionally Transformed Liver Progenitor Cell Line
A. S. Fiorino, A. M. Diehl, H. Z. Lin, I. R. Lemischka, and L. M. Reid 247
Effects of H_2O_2 on the Growth, Secretion, and Metabolism of Hybridoma Cells in Culture
Serge Ostrovidov, Patricia Franck, Josette Capiaumont, Brigitte Douset, and Francine Belleville 259
Prostaglandins Act as Neurotoxin for Differentiated Neuroblastoma Cells in Culture and Increase Levels of Ubiquitin and β-Amyloid
Kedar N. Prasad, Francisco G. La Rosa, and Judith E. Prasad 265

VOLUME 34 NUMBER 4
ISSN 1071-2690
APRIL 1998

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

Use of Flow Cytometry to Study Growth of Human Airway Smooth Muscle Cells
Zhen-Du Zhang and Gerard Cox 275
Nucleotide Sequence of Canine Fibroblast Growth Factor-8 (FGF-8)
Halit Canatan and Young C. Lin 278
Thyroid Hormone Acting on Astrocytes in Culture
Andréa Gonçalves Trentin, Flávia Carvalho Alcantara Gomes, Flávia Regina Souza Lima, and Vivaldo Moura Neto 280

CELLULAR MODELS

Karyotypic Changes Associated with Spontaneous Acquisition and Loss of Tumorigenicity in a Human Transformed Bronchial Epithelial Cell Line: Evidence for *In Vivo* Selection of Transformed Clones
Joan H. Schiller, Gerard Bittner, Shi-Qi Wu, and Lorraine Meisner 283
A Novel Human Glassy-Cell Carcinoma Cell Line Producing IL-6 and IL-8 from Uterine Cervix
Akinori Oki, Masato Nishida, Toyomi Satoh, Hajime Tsunoda, Kunitake Kasahara, Kaoru Saijo, Takeshi Kubo, and Tadao Ohno 290
Hemopoiesis in Long-Term Stroma-Dependent Cultures from Lymphoid Tissue: Production of Cells with Myeloid/Dendritic Characteristics
K. Ni and H. C. O'Neill 298
A Simplified Method for Growth of Human Microvascular Endothelial Cells Results in Decreased Senescence and Continued Responsiveness to Cytokines and Growth Factors
Birgit M. Kräling and Joyce Bischoff 308
Simulated Microgravity Conditions Enhance Differentiation of Cultured PC12 Cells Towards the Neuroendocrine Phenotype
Peter I. Lelkes, Daniel L. Galvan, G. Thomas Hayman, Thomas J. Goodwin, Dawn Y. Chatman, Sunu Cherian, Raul M. G. Garcia, and Brian R. Unsworth 316

GROWTH, DIFFERENTIATION AND SENESCENCE

Establishment and Initial Characterization of the Ovine Mammary Epithelial Cell Line NISH
Neta Ilan, Itamar Barash, Elisha Gootwine, and Moshe Shani 326
Non-Small-Cell Lung Carcinoma Cells Invade Human Bronchial Mucosa *In Vitro*
Lars Fjellbirkeland, Rolf Bjerkvig, and Ole Didrik Laerum 333
Basic Fibroblast Growth Factor Regulates Extracellular Matrix and Contractile Protein Expression Independent of Proliferation in Vascular Smooth Muscle Cells
Seiya Kato, Akihiko Muraishi, Tetsuya Miyamoto, and Jonathan C. Fox 341
Positive Regulation of Normal and Tumoral Mammary Epithelial Cell Proliferation by Fibroblasts in Coculture
Cecile Gache, Yolande Berthois, Pierre-Marie Martin, and Simone Saez 347

VOLUME 34 NUMBER 5
ISSN 1071-2690
MAY 1998

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

LAMP-1/ESGp Appears on the Cell Surface of Single Celled Mouse Embryos Subsequent to Fertilization
Paulette J. McCormick, Aileen Finneran, and Eric J. Bonventre 353
Validation of Routine Mycoplasma Testing by PCR
L. H. Toji, T. C. Lenchitz, V. A. Kwiatkowski, J. A. Sarama, and R. A. Mulivor 356
A Clonal Chondrocytic Cell Line Derived from BMP-2/T Antigen-Expressing Transgenic Mouse
Chi Xu, Xiaohui Ji, Marie A. Harris, Gregory R. Mundy, and Stephen E. Harris 359
Primary Human Vascular Smooth Muscle Cell Culture Enhanced by Human Umbilical Cord Serum
Yvonne K. Hodges-Garcia, Nicolas Madigan, and Lawrence D. Horwitz 364
Establishment of Monk Seal Cell Lines
Yuanan Lu, Alonso Aguirre, Robert C. Braun, and Philip C. Loh 367

CELLULAR MODELS

Culture and Characterization of Sinusoidal Endothelial Cells Isolated from Human Liver
George W. Daneker, Serena A. Lund, S. Wright Caughman, Robert A. Swerlick, Andrew H. Fischer, Charles A. Staley, and Edwin W. Ades 370
Cytokine Inducible Matrix Metalloproteinase Expression in Immortalized Rat Chondrocytes is Independent of Nitric Oxide Stimulation
Walter E. Horton, Jr., Imelda Udo, Patricia Precht, Richard Balakir, and Karen Hasty 378
The Proliferation of Mouse Mammary Epithelial Cells in Response to Specific Mitogens is Modulated by the Mammary Fat Pad *In Vitro*
Russell C. Hovey, Duncan D. S. MacKenzie, and Thomas B. McFadden 385
Ultrastructural and Functional Study of the Liver Pigment Cells from *Rana esculenta* L.
Gabriella Guida, Immacolata Maida, Anna Gallone, Domenico Boffoli, and Rosa Cicero 393
Direct Cloning of Astrocytes from Primary Culture without Previous Immortalization
O. Mbarek, V. Vergé, and T. Hevor 401

GROWTH, DIFFERENTIATION AND SENESCENCE

Autocrine Secretion of TGF-β1 and TGF-β2 by Pre-Adipocytes and Adipocytes: A Potent Negative Regulator of Adipocyte Differentiation and Proliferation of Mammary Carcinoma Cells
Nader Rahimi, Eric Tremblay, Laura McAdam, Anita Roberts, and Bruce Elliott 412

IMMUNOLOGY

An *In Vitro* Approach for the Characterization of the Cycling B Cell Response
Brian T. Pittner, Melisa W. Mullins, Suzanna Reid, and E. Charles Snow 421

VOLUME 34 NUMBER 6
ISSN 1071-2690
JUNE 1998

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

Effect of Recombinant Growth Factors on Human Saphenous Vein Smooth Muscle Cells
Paul Dunlop, Karen Porter, Kevin Varty, Peter Bell, and Nicholas London 431
Evidence of p53-Induced Apoptosis in Cancer Cells Exposed to Taxol
Chari A. Bachman, Daniel A. Bills, and Shyamal K. Majumdar 434
Transepithelial Potential of Cultured Branchial Epithelia from Rainbow Trout Under Symmetrical Conditions
K. M. Gilmour, M. Fletcher, and P. Pärt 436
Establishment and Characterization of a Typical Primitive Neuroectodermal Tumor Cell Line
Hisashi Horiguchi, Miwa Matsui, Rieko Ohtsubo, Takesaburo Ogata, Michio Kaneko, Masachika Fujiwara, and Hiroshi Kamma 439
Long-Term Culture of Murine Bone-Marrow-Derived Endothelial Cells
Qi Ru Wang, Yan Yan, Bao He Wang, Wei Min Li, and Norman S. Wolf 443
Electrophoretic Pattern Changes in Macrophage Cell Lines Due to Culture in Protein-Free Medium
John G. Bruno, Eric Holwitt, and Johnathan L. Kiel 447
Desmin Expression in Mesangial Cells and Fibroblasts *In Vitro*
Daniela Ennulat, W. Lon Steffens, and Scott A. Brown 450

CELLULAR MODELS

Receptor Expression, Cytogenetic, and Molecular Analysis of Six Continuous Human Glioma Cell Lines
Carol A. Kruse, Marileila Varella-Garcia, Bette K. Kleinschmidt-Demasters, Geoffrey C. Owens, Elaine B. Spector, Habib Fakhrai, Elena Savelieva, and Bertrand C. Liang 455
Establishment of a Human Fibroblast Cell Line Producing Tumor Necrosis Factor α (KMST-6/TNF) and Growth Inhibitory Effects of Its Conditioned Medium on Malignant Cells in Culture
Kazuo Fushimi, Kakuji Torigoe, Hiroshi Yamauchi, Shouji Furusako, Masashi Kurimoto, and Masayoshi Namba 463
Isolation of EpH4 Mammary Epithelial Cell Subpopulations Which Differ in Their Morphogenetic Properties
R. Montesano, J. V. Soriano, I. Fialka, and L. Orci 468
An Improved Method to Obtain Highly Differentiated Monolayers of Human Bronchial Epithelial Cells
Luis J. V. Galietta, Sabina Lantero, Andrea Gazzolo, Oliviero Sacco, Luca Romano, Giovanni A. Rossi, and Olga Zegarra-Moran 478
Three-Dimensional Culture of Hepatocytes in a Continuously Flowing Medium
Kazuyoshi Takeshita, William C. Bowen, and George K. Michalopoulos 482

GROWTH, DIFFERENTIATION AND SENESCENCE

Monolayer Formation and DNA Synthesis of the Outer Epithelial Cells from Pearl Oyster Mantle in Coculture with Amebocytes
Masahiko Awaji and Tohru Suzuki 486
Anionic Glycoconjugates from Differentiated and Dedifferentiated Cultures of Bovine Articular Chondrocytes: Modulation by TGF-β
Catherine K. T. Chan and Tassos P. Anastassiades 492

IMMUNOLOGY

Macrophage Cell Lines Derived from Major Histocompatibility Complex II-Negative Mice
Alison A. Beharka, Jason W. Armstrong, and Stephen K. Chapes 499

VOLUME 34 NUMBER 7
ISSN 1071-2690
JULY–AUGUST 1998

CONTENTS

GUEST EDITORIAL

The Manzanar Project: Towards a Solution to Poverty, Hunger, Environmental Pollution, and Global Warming through Sea Water Aquaculture and Silviculture in Deserts
Gordon H. Sato, Tesfom Ghezae, and Samuel Negassi 509

LETTERS TO THE EDITOR

Scientific Reports

Primary Culture of Cholangiocytes from Normal Mouse Liver
Kaichiro Yahagi, Motoyasu Ishii, Koju Kobayashi, Yoshiyuki Ueno, Yutaka Mano, Hirofumi Nitsuma, Takehiko Igarashi, and Takayoshi Toyota 512
Gastric Epithelium under Organotypic Perfusion Culture
Sabine Kloth, Elfriede Eckert, Stefan J. Klein, Jan Monzer, Christiane Wanke, and Will W. Minuth 515
Ferritin and Hemoglobin in Pituitary Gland Extracts are Mitogenic for Rat Mammary Epithelial Cells in Culture
Mark C. Wilkinson, David G. Fernig, John A. Smith, Carmen A. Nunez de Croker, and Phillip S. Rudland 518
Hepatocyte Growth Factor Regulates Activin β_A mRNA in Submandibular Gland
Miho Furue and Shigeru Saito 520
Plasmodium-Falciparum-Infected Erythrocytes Adhere to Immortalized Human Bone Marrow Endothelial Cells
J. G. Pradhonme, G. Almeida-Porada, J. L. Ascensao, and J. W. Sherman 524
The Processing of Antibodies Bound to B-Cell Lymphomas: The Effect of Inadvertent Mycoplasma Contamination
Gaik Lin Ong and M. Jules Mattes 527

CELLULAR MODELS

An Improved Method for Isolation of Microvascular Endothelial Cells from Normal and Inflamed Human Lung
Jin Ning Lou, Nabil Mili, Christine Decrind, Yves Donati, Sylvie Kossodo, Anastase Spiliopoulos, Bara Ricou, Peter M. Suter, Denis R. Morel, Philippe Morel, and Georges E. Grau 529
Isolation and Characterization of a Novel Human Bladder Cancer Cell Line: BK10
Kathryn M. Roberson, Donna R. Yancey, Hesed Padilla-Nash, Darryl W. Edwards, William Nash, Sharone Jacobs, George M. Padilla, William A. Larchian, and Cary N. Robertson 537
Modulation of Angiotensin-Converting Enzyme in Cultured Human Vascular Endothelial Cells
Irina V. Balyasnikova, Sergei M. Danilov, Vladimir R. Muzykantov, and Aron B. Fisher 545
Defined Medium for Normal Adult Human Prostatic Stromal Cells
Donna M. Peehl, Robert G. Sellers, and Stephen T. Wong 555
Growth Potential of *Rana Tigerina* Skin Lipids in Cell Cultures
K. Purna Sai and Mary Babu 561
A Sequential Culture Approach to Study Osteoclast Differentiation from Nonadherent Porcine Bone Marrow Cells
Ben A. A. Scheven, John S. Milne, and Simon P. Robins 568
Regulation of Protein and Prostaglandin Secretion in Polarized Primary Cultures of Caprine Uterine Epithelial Cells
G. R. Newton, D. W. Weise, J. A. Bowen, S. Woldesenbet, and R. C. Burghardt 578

GROWTH, DIFFERENTIATION AND SENESCENCE

Establishment of an Epidermal Growth Factor-Dependent, Multipotent Neural Precursor Cell Line
Yumiko Nakagaito, Motonobu Satoh, Haruhiko Kuno, Toshi Iwama, Masao Takeuchi, Akira Hakura, and Touho Yoshida 585
Expression of Estrogen Receptors during Growth of Human Pancreatic Adenocarcinoma Cells (Capan-1)-Relationship with Differentiation
Etienne Hollande, Marjorie Fanjul, Nawal Houti, Jean-Charles Faye, and Philippe Courriere 593

VOLUME 34 NUMBER 8
ISSN 1071-2690
SEPTEMBER 1998

CONTENTS

IN MEMORIAM

Memoriam: William J. McCarthy
Brian Federici 603

LETTERS TO THE EDITOR

Scientific Reports

Lymphoid Cell–Growth Hormone Interactions: A Serum-Free Model
James E. Shaw and Raymond Lang 604
Crystallization of Neutral Red Vital Stain from Minimum Essential Medium Due to pH Instability
C. S. Baker 607
Strain-Induced Dual Alignment of L6 Rat Skeletal Muscle Cells
Romualdo J. Segurola, Jr., Ira Mills, and Bauer E. Sumpio 609
Characterization of NR10, Macrophages
John G. Bruno, Jill E. Parker, John Kains, Trevor J. Darcy, Teri R. Grubbs, Ann B. Cox, Pedro J. Morales, John L. Alls, and Johnathan L. Kiel 613
Matrix mRNA Levels in Ligament Tissue Versus Cells
Niamh I. Donnelly, David A. Hart, and Cyril B. Frank 617
Polyamine as a Growth Promoter for Cultured Insect Cells
Jun Mitsuhashi 619
Primary Culture of Colonocytes in Rotating Bioreactor
Bertrand Kaeffer and Sébastien Briollais 622
The Motile Behavior of Human Breast Cancer Cells Characterized by Time-Lapse Videomicroscopy
Talitha T. Rajah, S. M. Abbas Abidi, Dennis J. Rambo, John J. Dmytryk, and J. Thomas Pento 626
Culture of Mosquito Cells in Eagle's Medium
Karen M. Shih, Anna Gerenday, and Ann M. Fallon 629

CELLULAR AND MOLECULAR TOXICOLOGY

Acute Cytotoxicity Testing with Cultured Human Lung and Dermal Cells
Frank A. Barile and Monica Cardona 631

CELLULAR MODELS

Organotypic Culture of Human Ovarian Surface Epithelial Cells: A Potential Model for Ovarian Carcinogenesis
Lucie Gregoire, Adnan Munkarah, Raja Rabah, Robert T. Morris, and Wayne D. Lancaster 636
Fibroblast Movements during Contraction of Collagen Lattices—A Quantitative Study Using a New Three-Dimensional Time-Lapse Technique with Phase-Contrast Laser Scanning Microscopy
Erkki Tarpila, Reza M. Ghassemifar, and Lennart E. Fransén 640
In Vitro Biosynthesis of Juvenile Hormone in Larval Honey Bees: Comparison of Six Media
Anna Rachinsky and Klaus Hartfelder 646
BG-1 Ovarian Cell Line: An Alternative Model for Examining Estrogen-Dependent Growth *In Vitro*
William S. Baldwin, Sylvia W. Curtis, Clay A. Cauthen, John I. Risinger, Kenneth S. Korach, and J. Carl Barrett 649

GROWTH, DIFFERENTIATION AND SENESCENCE

Response of Preimplantation Murine Embryos to Heat Shock as Modified by Developmental Stage and Glutathione Status
C. F. Arechiga and P. J. Hansen 655

IMMUNOLOGY

Factors Affecting Caco-2 Intestinal Epithelial Cell Interleukin-6 Secretion
S. J. D. Vitkus, S. A. Hanifin, and D. W. McGee 660

VOLUME 34 NUMBER 9
ISSN 1071-2690
OCTOBER 1998

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

Insect Cell Line Authentication by Denaturing Gradient Gel Electrophoresis
Supriya G. Kshirsagar, Milind S. Patole, and Yogesh S. Shouche 665
Metaplastic Changes in Cultured Human Ovarian Surface Epithelium
Alice S. T. Wong, Peter C. K. Leung, Sarah L. Maines-Bandiera, and Nelly Auersperg 668
Constitutive and Inducible Expression of Cytochrome P4501A1 and P4501B1 in Human Vascular Endothelial and Smooth Muscle Cells
Wei Zhao, Alan R. Parrish, and Kenneth S. Ramos 671
The Effect of Differentiation on the Brush Border Membrane Ferric Reductase Activity in CACO-2 Cells
Cem Ekmekcioglu and Wolfgang Marktl 674
Differential Expression of Cell Adhesion Molecules in Phenotypic Variants of the Small Cell Lung Carcinoma Cell Line NCI-H69
A. D. Seddon, V. L. Green, C. J. Newton, J. Greenman, S. L. Atkin, and V. Speirs 677

BIOTECHNOLOGY

Modification of Materials Formed from Poly(L-Lactic Acid) to Enable Covalent Binding of Biopolymers: Application to High-Density Three-Dimensional Cell Culture in Foams with Attached Collagen
Ji Zheng, S. Robert Northrup, and Peter J. Hornsby 679

CELLULAR AND MOLECULAR TOXICOLOGY

The Mechanism of Thioacetamide-Induced Apoptosis in the L37 Albumin-SV40 T-Antigen Transgenic Rat Hepatocyte-Derived Cell Line Occurs without DNA Fragmentation
Steven J. Bulera, Carol A. Sattler, Wendy L. Gast, Susan Heath, Todd A. Festerling, and Henry C. Pitot 685

CELLULAR MODELS

Bioreactor Perfusion System for the Long-Term Maintenance of Tissue-Engineered Skeletal Muscle Organoids
Joseph A. Chromiak, Janet Shansky, Carmen Perrone, and Herman H. Vandenburgh 694
Characterization and Growth Regulation of a Rat Intrahepatic Bile Duct Epithelial Cell Line under Hormonally Defined, Serum-Free Conditions
Piet C. de Groen, Ben Vroman, Karen Laakso, and Nicholas F. LaRusso 704
Clonal Characterization of Mouse Mammary Luminal Epithelial and Myoepithelial Cells Separated by Fluorescence-Activated Cell Sorting
Matthew J. Smalley, Jenny Titley, and Michael J. O'Hare 711

GROWTH, DIFFERENTIATION AND SENESCENCE

Isolation and Characterization of a Novel Bladder Cancer Cell Line: Inhibition by Epidermal Growth Factor
Harris Pratsinis, Angelica Saetta, Sarantis Gagos, and Panayiotis Davaris 722

INFECTIOUS DISEASE/CELLULAR PATHOLOGY

Characterization of an HPV-Negative Cell Line (FR-CAR) Derived from a Cervical Squamous Intraepithelial Lesion
Carolien van Haaften-Day, Barbara Rose, Carol Thompson, Robyn Lukeis, and Peter Russell 729

SPECIAL POSTER SESSION ABSTRACTS 734

VOLUME 34 NUMBER 10
ISSN 1071-2690
NOVEMBER–DECEMBER 1998

CONTENTS

LETTERS TO THE EDITOR

Scientific Reports

Immuno-Epithelial Interactions: Cytokine Modulation of Normal Rabbit Colonocyte Function
Alda Vidrich, Peter A. Anton, and Fergus Shanahan 743
α-Lactalbumin as a Modulator of Mammary Cellular Activity
Brenda Alston-Mills, Christopher D. Hepler, Lisa Sternhagen, Jonathan C. Allen, and K. Alan Meshaw 747
Cyclophosphamide-Induced Chromosomal Aberrations and Associated Congenital Malformations in Rats
Ajit Kumar Saxena and Gajendra Singh 751
Further Steps in the Initiation of Cell Cultures from Embryos and Adult Sponge Colonies
Baruch Rinkevich, Ronit Blasko, and Micha Ilan 753

BIOTECHNOLOGY

Development of a Serum-Free Medium for the Production of Humanized Antibody from Chinese Hamster Ovary Cells Using a Statistical Design
Eun Jung Kim, No Soo Kim, and Gyun Min Lee 757

CELLULAR AND MOLECULAR TOXICOLOGY

Viability and Differential Function of Rainbow Trout Liver Cells in Primary Culture: Coculture with Two Permanent Fish Cells
S. Schols, T. Braunbeck, and H. Segner 762

CELLULAR MODELS

A Fluorometric Assay for the Measurement of Endothelial Cell Density *In Vitro*
Zahra Parandoosh, Cheryl A. Bogowitz, and Michael P. Nova 772
Immortalized Mouse Brain Endothelial Cells Are Ultrastructurally Similar to Endothelial Cells and Respond to Astrocyte-Conditioned Medium
John A. Wijsman and Richard R. Shivers 777
Selective and Organotypic Culture of Intrahepatic Bile Duct Cells from Adult Pig Liver
Ned C. Talbot and Thomas J. Caperna 785
Morphological and Molecular Characterization of New Drosophila Cell Lines Established from a Strain Permissive for Gypsy Transposition
Fabienne Chalvet, Alain Debec, Christiane Marcaillou, Christine Rougeau, and Alain Bucheton 799
Enhanced Neointimal Growth in Cultured Rabbit Aorta Following *In Vivo* Balloon Angioplasty
William E. Dale, Peter S. Batra, and Edward H. Blaine 805

GROWTH, DIFFERENTIATION AND SENESCENCE

Ultrastructural Changes of *Drosophila* Larval and Prepupal Salivary Glands Cultured *In Vitro* with Ecdysone
Robert Farkaš and Gabriela Suláková 813
Epidermal Growth Factor Accelerates Recovery of LLC-PK1 Cells Following Oxidant Injury
Sharon P. Andreoli, Coleen P. Mallett, James A. McAteer, Stephen A. Kempson, and Naomi Fineberg 824
Msx-1 Gene Expression and Regulation in Embryonic Palatal Tissue
Paul Nugent and Robert M. Greene 831
Responsiveness to Hormone, Growth Factor and Drug Treatment of a Human Breast Cancer Cell Line: Comparison Between Early and Late Cultures
Alessandra de Cupis, Paolo Pirani, Laura Fazzuoli, and Roberto E. Favoni 836

Index 844

Contents 851